

Do Patients Undergoing Successive Prostate Biopsies Over Time Need Repeat Rectal Swab?



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Introduction

- Targeted antibiotic prophylaxis based on pre-biopsy rectal swab reduces the risk of infection following transrectal ultrasound-guided (TRUS) prostate biopsy
- Whether or not a given patient's pre-biopsy rectal swab susceptibility profile changes over time has not been studied
- We investigate trends in rectal swab susceptibility over time to understand the incidence of, and factors associated with, change in a given patient's rectal swab profile

Methods

Patient Population

- Patients undergoing TRUS prostate biopsy between 5/2017 and 10/2019
 - For these patients, rectal swab data were available from 2007 to 2019

Pre-Biopsy Evaluation

- All patients underwent pre-biopsy rectal swab to assess for presence of ciprofloxacin-resistant gram negative rods

Study Design

- We retrospectively reviewed 377 patients
- Patients with more than one rectal swab were included in the analysis
- Outcomes assessed:
 - Incidence of change in susceptibility profile between successive biopsies
 - Whether number of prior biopsies was predictive of ciprofloxacin resistance

Results

Table 1. Prior Swab Characteristics	n	%
Number of patients with ≥2 cultures	136	-
Total number of rectal cultures	305	-
Overall ciprofloxacin resistant cultures	45	15.7
Comparison of successive swabs		
Instances of no change in susceptibility	153	82.7
Instances of change in susceptibility	32	17.2
Sensitive to resistant	16	8.6
Resistant to sensitive	11	5.9
Remained resistant but with new profile	5	2.7

Figure 2. Ciprofloxacin Resistance based on Prior Biopsies

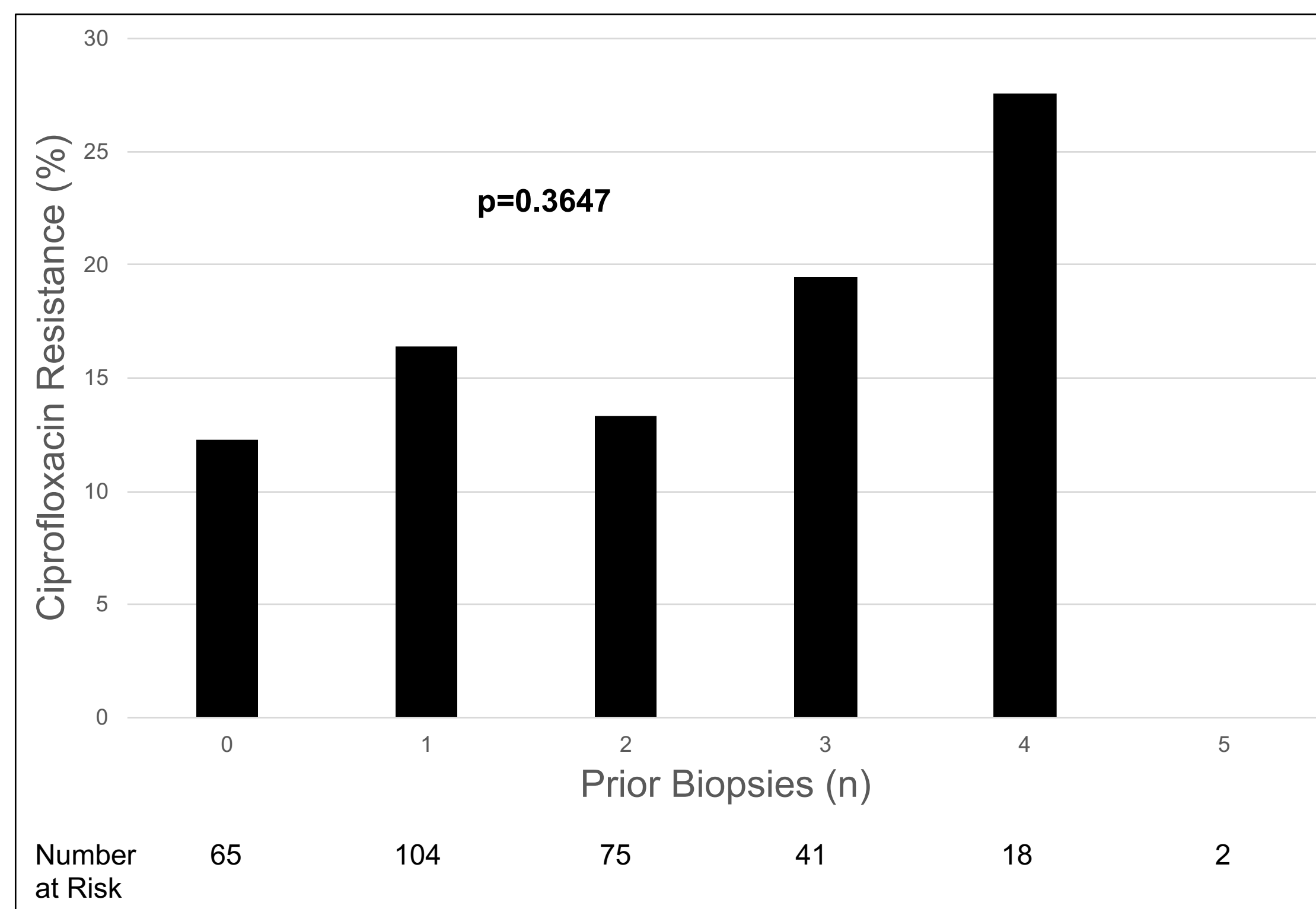
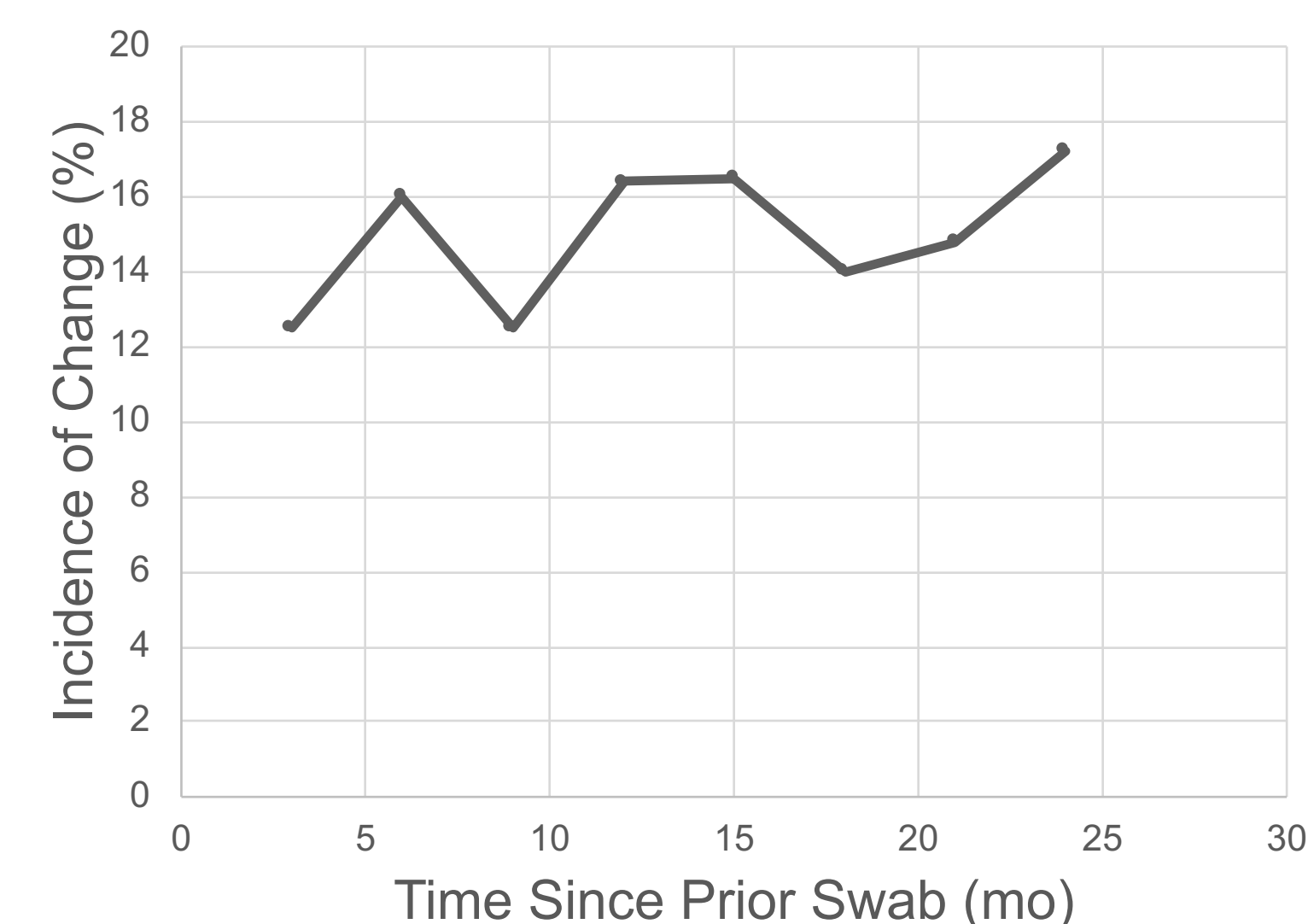


Figure 1. Effect of Time on Change in Profile



A logistic regression was performed to assess whether time between swabs was predictive of ciprofloxacin resistance and found no significance (p = 0.2636)

Discussion/Conclusions

- Patients undergoing successive prostate biopsies do not have consistent results of rectal swab susceptibility profile over time
- Time between rectal swabs was not predictive of change in rectal swab susceptibility
- Increased number of prior biopsies was not predictive of ciprofloxacin resistance
- We recommend performing repeat rectal swab culture in all patients undergoing TRUS prostate biopsy